CLAIMS

We claim:

1. A system for monitoring and dispensing medical items comprising:

a plurality of item storage locations, wherein at least one unit of a type of medical item is positionable in each location;

a sensor adjacent each location wherein said sensor generates an addition signal indicative of addition of a unit of the item at the location and a subtraction signal indicative of a unit of the item being removed from the location;

a counter connected to the sensor whereby said counter counts the signals generated by the sensor wherein the counter holds a count of the units of said items added and subtracted at the location;

at least one processor connected to the counter, said processor connected to at least one data store, wherein said data store includes a total of the type items at said location, and wherein said processor periodically reads said counter and modifies said total in said data store in accordance with the count from said counter.

2. The system according to claim 1 and further comprising a data terminal connected to said counter and said processor, wherein said data terminal includes a patient selection device

and wherein said data store includes a patient record related to said patient and wherein said count of units of said type items is included in said patient record responsive to said patient selection device.

3. The system according to claim 1 and further comprising a data terminal connected to said processor and said counter, wherein said data terminal has an output device for indicating a number of said items to be used, and wherein said data terminal further includes an input device for selecting a medical procedure, and wherein said data store includes a procedure record wherein data representative of a use number of said items in said location to be used during said procedure is stored, and wherein said use number is indicated through said output device responsive to selection of said medical procedure at said data terminal.

4. The system according to claim 1 and further comprising a data terminal connected to said processor and said counter, and wherein said data terminal includes a user identification device whereby a user may identify himself at the data terminal, and wherein said data store includes a user record related to authorized users and wherein said count of units of said type is stored in said data store in association with said user record.

5. The system according to claim 1 wherein said location holding the medical item type is a secure location wherein access thereto is controlled by a lock, and further comprising a data terminal connected to said processor and said lock and wherein said data terminal includes a user identification device wherein said user identification device receives data

identifying a user of the medical item, and wherein said data store includes a user record related to authorized users and wherein said processor is operative to unlock the lock responsive to the user inputting data corresponding to an authorized user record at said data terminal.

6. The system according to claim 5 wherein said user identification device at said data terminal includes a reader for reading a coded object associated with said user.

7. The system according to claim 6 wherein said user identification device at said data terminal further includes a manual input, wherein said manual input is uniquely associated with said coded object and wherein unlocking of said lock is responsive to reading said coded object and receiving the manual input uniquely associated therewith.

8. The system according to claim 5 wherein said processor is not operative to unlock said lock unless data corresponding to at least two (2) authorized user records is input at said data terminal.

9. The system according to claim 1 and further comprising a data terminal connected to said processor and said counter, and wherein said data terminal includes an input device and wherein said input device is selectively operable to indicate the addition of inventory at said location.

10. The system according to claim 1 wherein said data store includes identifying indicia associated with the medical item in said location.

11. The system according to claim 1 wherein said data store further includes a lower limit for the number of units of said medical item and wherein said system further comprises an indicator for indicating when said total reaches said limit.

12. The system according to claim 11 wherein an administrator terminal comprises said indicator.

13. The system according to claim 1 wherein said data store includes a location record associated with each said location, said location record including said total, and wherein said location record includes data representative of at least one characteristic of said item type in said location.

14. The system according to claim 13 and further comprising an administrator terminal including an administrator input device, said administrator terminal connected to said data store, and wherein said data representative of said characteristic of said item type is input to said location record through said administrator terminal.

15. The system according to claim 1 and further comprising a location identification indicator uniquely associated with each said counter, wherein said location identifying indicator is read in conjunction with said counter by said processor.

16. The system according to claim 1 and further comprising a data terminal connected to said processor and said counter, and wherein said data terminal includes an input device wherein a user inputs identifying data associated with a physician, and wherein said data store includes a physician record associated with said physician and wherein said count is stored in said data store in association with said physician record.

17. The system according to claim 1 wherein said data store includes a physician record including data representative of preferred operating room conditions for said physician, and wherein said system further comprises a data terminal connected to said processor and including an input device wherein a user inputs physician identifying data associated with said physician, said data terminal further including an output device wherein said output device outputs the physician's preferred operating room conditions responsive to input of said physician identifying data.

18. The system according to claim 17 wherein said physician record includes data representative of musical preferences of said physician.

19. The system according to claim 11 and further comprising means for issuing an acquisition request to a source of said medical item responsive to said indicator.

20. The system according to claim 1 and further comprising a timer in connection with said counter, wherein said timer holds time indicia in association with said count.

21. A system for monitoring and dispensing medical items comprising:

a plurality of storage locations wherein at least one unit of a type of medical item is positionable in each location prior to use;

a sensor adjacent each location wherein said sensor generates a signal indicative of removal of a unit of the item at said location;

a data terminal operatively connected to said sensor, said data terminal including a data entry device whereby a user inputs data identifying a patient receiving said medical item proximate in time to removal of said item from said location;

at least one processor operatively connected to said data terminal, said processor operatively connected to at least one data store, said data store including a patient record associated with the patient and a location record associated with each storage location, the location record including data representative of the respective type of

medical item in each location, and wherein upon removal of the item type from a location by a user data representative of use of the type medical item for the patient is included in the patient record.

22. A system for monitoring and dispensing medical items comprising:

a plurality of storage locations, wherein at least one unit of a type of medical item is positionable in each location prior to use;

a dispenser mechanism for selectively dispensing items from a storage location responsive to electrical signals;

a data terminal operatively connected to the dispenser mechanism, the data terminal including a data entry device whereby a user inputs data identifying a patient receiving said medical item proximate to dispense of said item by said dispenser mechanism;

at least one processor operatively connected to said data terminal, said processor operatively connected to at least one data store, said data store including a patient record associated with the patient and a location record associated with at least one storage location in the dispenser mechanism, the location record including the respective type of medical item in each location, and wherein upon dispense of an

item from a location use of the type medical item for the patient is included in the patient record.

23. The system according to claim 22 wherein said data store further includes a plurality of authorized user records and wherein said data terminal further includes a user data entry device wherein the user inputs user identification data, and wherein said processor enables operation of said dispenser only when said user identification data corresponds to an authorized user record in said data store.

24. The system according to claim 23 wherein data indicative of the type of item dispensed by said user is stored in association with said user record in said data store.

25. The system according to claim 23 wherein said processor enables operation of said dispenser only if at least two (2) authorized users have input their respective user identification data at said data terminal.

26. The system according to claim 23 wherein said user identification data includes both data encoded on an object and data input manually by the user, said manually input data having a unique relationship with the data encoded on the object.

27. The system according to claim 21 wherein said data store further includes a total of units associated with each location record and wherein said total is reduced by a number of units removed from the location.

28. The system according to claim 27 wherein said system further comprises an indicator, and wherein an indication is given by said indicator when said total of units in the location reaches a lower limit.

29. The system according to claim 27 and further comprising a counter connected to each sensor, and wherein said counter holds a count of units added to or subtracted from said location, and wherein said system reads said count periodically and updates the respective total for said location in said data store.

30. The system according to claim 29 wherein each said counter has associated therewith the location identifying indicator uniquely associated with said counter wherein said count in said counter is read in conjunction with said location identifying indicator by said processor.

31. The system according to claim 30 wherein said counter and location identifying indicator are connected to and are periodically read by said processor.

32. The system according to claim 21 wherein said data store includes at least one procedure record, said procedure record including types of medical items used in a medical

procedure, and wherein said data terminal includes a procedure selection device and an output device wherein upon selection of said procedure at said data terminal said output device indicates types of medical items to be used in the procedure.

33. The system according to claim 22 and further comprising a verification sensor associated with said dispenser mechanism, wherein said verification sensor senses that said medical item has been dispensed from said storage location and wherein said verification sensor is connected to said data terminal and said delivery of said medical item for said patient is included in said patient record only when said verification sensor senses that said medical item has been dispensed.

34. The system according to claim 21 wherein said unit of said medical item has machine readable identifying indicia thereon, and wherein said sensor reads said indicia, and wherein said data store includes an item record associated with said indicia, and wherein upon removal of said item type from a location by user, said processor determines if said indicia read from said item taken corresponds with the data representative of the medical item stored in the location record.

35. A system for monitoring and dispensing medical items comprising:

a plurality of storage locations wherein at least one unit of an item type is positionable in each location prior to use, each said item including thereon a machine readable indicia representative of the type of item;

a sensor adjacent a location for reading said machine readable indicia on said items and for generating signals representative thereof, and wherein said signals are generated responsive to removal of said item from said location;

at least one processor operatively connected to said sensor, said processor operatively connected to at least one data store, said data store including at least one patient record associated with a patient, and at least one item type record associated with said signals representative of said indicia;

a data terminal operatively connected to said processor, said data terminal including a data entry device whereby a user inputs data identifying said patient, and wherein upon input of said patient identification data and responsive to said signals from said sensor, said processor records use of said item type in said patient record.

36. The system according to claim 35 wherein said machine readable indicia is bar coding.

37. A system for monitoring and dispensing medical items comprising:

a plurality of storage locations wherein at least one unit of a medical item type is positionable in each location prior to use, and wherein each said item type has machine readable indicia thereon representative of the item type;

a reader adjacent to at least one location wherein said reader is operative to read said indicia on said item type and to generate signals representative thereof when said item type is placed in said location;

at least one processor operatively connected to said reader and to at least one data store, said data store including at least one item type record associated with said indicia on said item type, and at least one location record associated with one of said storage locations, and wherein said processor is operative responsive to receipt of said signals from said reader to include said item type in association with said location record, said data store further including at least one patient record associated with a patient;

a patient identification input device in operative connection with said processor, whereby a user may identify said patient;

an indicator operatively connected to said processor, wherein said indicator generates indicator signals responsive to removal of a unit of said item type from said location, wherein said processor is operative to include use of said item type included in

association with said location record in said patient record responsive to identification of said patient at said patient identification input device and said indicator signals.